

What is claimed is:

1. An apparatus for providing a crypto key and an associated checkword of said crypto key to an encryption device for a telemeter system of a missile, said apparatus comprising:

loading means for generating said crypto key and said associated checkword;

control means connected to said loading means to receive said crypto key and said associated checkword from said loading means, said control means sending a first logic signal to said loading means to effect a transfer of said crypto key and said associated checkword from said loading means to said control means for storage within said control means;

said control means being connected to said encryption device, said control means sending a second logic signal to said encryption device to initiate a load of said crypto key and said associated checkword into said encryption device;

said control means receiving from said encryption device a third logic signal, said control means, responsive to said third logic signal, loading said crypto key and said associated checkword into

24           said encryption device;  
25           said control means being connected to a transmitter  
26           for the telemeter system of said missile, said  
27           control means providing a fourth logic signal to  
28           said transmitter to disable said transmitter when  
29           said crypto key and said associated checkword are  
30           loaded into said encryption device preventing said  
31           crypto key and said associated checkword from  
32           being transmitted by said transmitter; and  
33           said control means being connected to a missile  
34           interface within said missile to receive a fifth  
35           logic signal from said missile interface upon a  
36           launch of said missile, said control means,  
37           responsive to said fifth logic signal, erasing  
38           said crypto key and said associated checkword from  
39           said control means.

1           2. The apparatus of claim 1 wherein said control means  
2           comprises an 8-bit Microcontroller.

1           3. The apparatus of claim 1 wherein said control means  
2           includes an EEPROM for storing said crypto key and said  
3           associated checkword and a copy of said crypto key and said  
4           associated checkword.

1 4. The apparatus of claim 1 further comprising a  
2 light emitting diode connected to said control means, said  
3 light emitting diode displaying a status for a load of said  
4 crypto key and said associated checkword into said  
5 encryption device.

1 5. The apparatus of claim 1 further comprising a light  
2 emitting diode connected to said control means, said light  
3 emitting diode displaying a status for an erase of said  
4 crypto key and said associated checkword from said  
5 microcontroller.

1 6. An apparatus for providing a crypto key and an  
2 associated checkword of said crypto key to an encryption  
3 device for a telemeter system of a missile, said apparatus  
4 comprising:

5 a key loader having said crypto key and said associated  
6 checkword stored therein;

7 a microcontroller connected to said key loader to  
8 receive said crypto key and said associated  
9 checkword from said key loader, said  
10 microcontroller sending a first variable request  
11 signal to said key loader to effect a transfer of

12 said crypto key and said associated checkword from  
 13 said key loader to said microcontroller for  
 14 storage within said microcontroller;  
 15 said microcontroller being connected to said encryption  
 16 device, said microcontroller sending a sense in  
 17 signal to said encryption device to initiate a  
 18 load of said crypto key and said associated  
 19 checkword into said encryption device;  
 20 said microcontroller receiving from said encryption  
 21 device a second variable request signal, said  
 22 microcontroller, responsive to said second  
 23 variable request, loading said crypto key and said  
 24 associated checkword into said encryption device;  
 25 and  
 26 said microcontroller being connected to a transmitter  
 27 for the telemeter system of said missile, said  
 28 microcontroller providing a transmitter disable  
 29 signal to said transmitter to disable said  
 30 transmitter when said crypto key and said  
 31 associated checkword are loaded into said  
 32 encryption device preventing said crypto key and  
 33 said associated checkword from being transmitted  
 34 by said transmitter.

1           7. The apparatus of claim 6 wherein said  
2 microcontroller comprises an 8-bit Microcontroller.

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1           8. The apparatus of claim 6 wherein said  
2 microcontroller includes an EEPROM for storing said crypto  
3 key and said associated checkword and a copy of said crypto  
4 key and said associated checkword.

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1           9. The apparatus of claim 6 further comprising a  
2 light emitting diode connected to said microcontroller, said  
3 light emitting diode displaying a status for a load of said  
4 crypto key and said associated checkword into said  
5 encryption device.

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1           10. The apparatus of claim 6 wherein said  
2 microcontroller is connected to a missile interface within  
3 said missile to receive a launch signal from said missile  
4 interface upon a launch of said missile, said  
5 microcontroller, responsive to said launch signal, erasing  
6 said crypto key and said associated checkword from said  
7 microcontroller.

1           11. The apparatus of claim 10 further comprising a  
2 light emitting diode connected to said microcontroller, said

3 light emitting diode displaying a status for an erase of  
4 said crypto key and said associated checkword from said  
5 microcontroller.

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1 12. The apparatus of claim 6 wherein said  
2 microcontroller is connected to a loader interface within  
3 said missile to receive an erase signal from said loader  
4 interface, said microcontroller, responsive to said erase  
5 signal, erasing said crypto key and said associated  
6 checkword from said microcontroller.

7 13. An apparatus for providing a crypto key and an  
8 associated checkword of said crypto key to an encryption  
9 device for a telemeter system of a missile, said apparatus  
10 comprising:

11 a key loader having said crypto key and said associated  
12 checkword stored therein;

13 a microcontroller connected to said key loader to  
receive said crypto key and said associated  
checkword from said key loader, said  
microcontroller sending a first variable request  
signal to said key loader to effect a transfer of  
said crypto key and said associated checkword from  
said key loader to said microcontroller for

14 storage within said microcontroller;  
15 said microcontroller being connected to said encryption  
16 device, said microcontroller sending a sense in  
17 signal to said encryption device to initiate a  
18 load of said crypto key and said associated  
19 checkword into said encryption device;  
20 said microcontroller receiving from said encryption  
21 device a second variable request signal, said  
22 microcontroller, responsive to said second  
23 variable request, loading said crypto key and said  
24 associated checkword into said encryption device;  
25 said microcontroller being connected to a transmitter  
26 for the telemeter system of said missile, said  
27 microcontroller providing a transmitter disable  
28 signal to said transmitter to disable said  
29 transmitter when said crypto key and said  
30 associated checkword are loaded into said  
31 encryption device preventing said crypto key and  
32 said associated checkword from being transmitted  
33 by said transmitter;  
34 a first light emitting diode connected to said  
35 microcontroller, said first light emitting diode  
36 displaying a status for a load of said crypto key  
37 and said associated checkword into said encryption

38 device;  
39 said microcontroller being connected to a missile  
40 interface within said missile to receive a launch  
41 signal from said missile interface upon a launch  
42 of said missile, said microcontroller, responsive  
43 to said launch signal, erasing said crypto key and  
44 said associated checkword from said  
45 microcontroller;  
46 a second light emitting diode connected to said  
47 microcontroller, said second light emitting diode  
48 displaying a status for an erase of said crypto  
49 key and said associated checkword from said  
50 microcontroller.

14. The apparatus of claim 13 wherein said  
microcontroller comprises an 8-bit Microcontroller.

15. The apparatus of claim 13 wherein said  
microcontroller includes an EEPROM for storing said crypto  
key and said associated checkword and a copy of said crypto  
key and said associated checkword.

16. The apparatus of claim 13 wherein said  
microcontroller is connected to a loader interface within



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3 said missile to receive an erase signal from said loader  
4 interface, said microcontroller, responsive to said erase  
5 signal, erasing said crypto key and said associated  
6 checkword from said microcontroller.

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